

Josh L. Roland

+1 202 663 6266 (t)

+1 202 663 6363 (f)

josh.roland@wilmerhale.com

February 6, 2007

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Re: IB Docket No. 02-364 — Review of the Spectrum Sharing Plan among Non-Geostationary Orbit Mobile Satellite Service Systems in the 1.6/2.4 GHz Bands

Dear Ms. Dortch:

On Tuesday, February 6, 2007, David Weinreich, Manager of Spectrum and Regulatory Engineering of Globalstar, Inc. ("Globalstar") and the undersigned, counsel to Globalstar, met with Angela Giancarlo, Legal Advisor to Commissioner Robert M. McDowell. The purpose of the meeting was to discuss Globalstar's views in the above-referenced proceeding, consistent with its prior pleadings before the Commission. A copy of the materials distributed at the meeting is attached to this letter.

Pursuant to Sections 1.49(f) and 1.1206(b) of the Commission's rules, a copy of this letter has been filed electronically.

Respectfully submitted,



Josh L. Roland
Counsel to Globalstar, Inc.

cc: Angela Giancarlo
David Weinreich



Background on the 1.6/2.4 ("Big LEO") Mobile Satellite Spectrum Band Plan

February 6, 2007

- The 1992 World Administrative Radiocommunication Conference (WARC) allocated the paired spectrum bands **1610-1626.5 MHz** (from earth to space) and **2483.5-2500 MHz** (from space to earth) for new Mobile Satellite Services ("MSS") for voice and data. This service is known as the Big LEO (for "low earth orbit") band.
- Motorola applied for a license first for its Iridium system and asked the FCC to assign all of the spectrum exclusively to Iridium. The FCC rejected Motorola's request and solicited additional applications. Six companies, including Globalstar (then known as *Loral/Qualcomm Partnership, L.P.*) and Iridium, applied.
- The FCC then opened a Negotiated Rulemaking Proceeding ("NRM") to assign the spectrum to the MSS applicants and urged the MSS industry to agree upon a band plan that would accommodate multiple providers to optimize competition and consumer benefits. One applicant later dropped out, and four of the five remaining applicants, including Globalstar, selected the code division multiple access (CDMA) technology because it facilitates sharing of the spectrum by multiple operators. Motorola, in contrast, insisted on a different technology (TDMA) for its Iridium system — one that precludes sharing with other operators.
- In January 1995, after lengthy NRM proceedings and reports, the FCC decided that the four CDMA systems would have to share the **1610-1621.35/2484.5-2500 MHz** portions of the Big LEO bands and that Iridium could have exclusive access to the **1621.35-1626.5 MHz** portion for its nonconforming system design. The FCC reserved its right to review the assignment of the 3.1 MHz between **1618.25 and 1621.35 MHz** in the event that only one CDMA system were ultimately constructed and launched, and if certain other circumstances ensued. Motorola, on behalf of Iridium, submitted material to the NRM Report that indicated that sharing between a TDMA system and a CDMA system was not possible.
- To conform with the FCC's Big LEO band plan and technical rules, Globalstar changed its initial system design to ensure that it could share spectrum with the other proposed CDMA licensees and operate with asymmetrical band assignments, which is very unusual, if not unprecedented, in the wireless industry. Motorola was able to build its system as originally designed although with a smaller spectrum assignment than it had originally sought.
- After several years, only Globalstar and Iridium were able to secure funding for their systems. Both companies went through chapter 11 bankruptcies, but both emerged as viable operators.
- In 2002, while Globalstar was still in bankruptcy, Iridium asked the FCC to change the Big LEO band plan by giving Iridium access to the 3.1 MHz of spectrum that the FCC had said it

would revisit if circumstances warranted. Iridium justified its request based on increased demand for its service in the Middle East. Globalstar (and others) protested that Iridium had failed to present any technical evidence that it required additional spectrum and that, consequently, there was no factual basis for changing the band assignments.

- Specifically, in its Reply Comments of July 25, 2003, Globalstar submitted a Technical Appendix demonstrating, among other things, that the Iridium System does not use spectrum efficiently, that Iridium did not increase system capacity when it had special temporary authority in the Middle East earlier that year, that Iridium does not need additional spectrum to offer “full rate” voice and data services, and that Iridium’s downlinks below 1621.35 MHz were likely to cause harmful interference to radioastronomy.^{1/}
- More importantly, Globalstar showed that it was using all of its available channels and that, in reliance on the FCC’s band plan, Globalstar had undertaken to develop many new and innovative services for first responders, the maritime and aviation industries. Globalstar also stated that it remained prepared to share its band with other CDMA licensees — a prospect which has become more likely with the planned development of the Courier system, an MSS provider authorized by Germany.
- In 2004, over Globalstar’s vigorous protest, the FCC granted Iridium access to the **1618.25-1621.35 MHz** portion of Globalstar’s assigned band. The FCC did not address Globalstar’s factual showings, including the fundamental problem that CDMA and TDMA systems cannot “share” the same spectrum. Globalstar reiterated that the record before the FCC did not support the decision but decided to accept, rather than continue to litigate, the decision if the FCC would make some minor adjustments to the revised band plan to lessen the negative impact on Globalstar. The FCC has not addressed Globalstar’s petition or its protest of the Bureau’s grant of Iridium’s license modification, now pending for 28 months.
- At Iridium’s urging, in its 2004 decision the FCC also requested further comment on whether it should give Iridium access to *another 2.25 MHz* of Globalstar’s spectrum (**1616-1618.25 MHz**) even though the FCC had itself found in its 2004 decision that *it would not take additional “spectrum from a competitor [Globalstar] on a worldwide basis for what appears to be a sporadic and geographically-based need” for spectrum by Iridium.*^{2/}

^{1/} ICO Global reached similar conclusions in its pleadings. Reply Comments of ICO Global (Holdings) Limited in IB Docket No. 02-364 (filed July 25, 2003) (citations omitted).

^{2/} See Report and Order, Fourth Report and Order and Further Notice of Proposed Rulemaking, *Review of the Spectrum Sharing Plan Among Non-Geostationary Satellite Orbit Mobile Satellite Service Systems in the 1.6/2.4 GHz Bands*, 19 FCC Rcd 13356, 13377-78 ¶ 47 (2004).

- Globalstar has vigorously opposed any further sharing.
 - *First*, Globalstar has demonstrated that forcing Globalstar to share yet more of its spectrum would threaten Globalstar's ability to continue to serve the many local, state, and federal public safety officials that increasingly rely on its services. This could prove disastrous in the event of future natural or manmade emergencies, as Globalstar's customers count on Globalstar to provide communications services that will remain operable even when ground-based networks fail.
 - *Second*, Globalstar has demonstrated that its spectrum is far more encumbered by conflicting uses and use restrictions than Iridium's. For example, Globalstar must limit its operations to avoid interference with radioastronomy observatories in its spectrum assignment and with radionavigation satellite services, such as GPS, adjacent to its spectrum assignment. Thus, while Iridium has argued that it has less spectrum than Globalstar and that "parity" requires that this be changed, the two companies' spectrum allocations are not equivalent. In fact, the FCC previously rejected Iridium's "parity" argument, holding that "*we are not convinced that such 'spectrum parity' in the Big LEO bands will better serve the public interest....If the Commission implemented 'spectrum parity' on a pure megahertz-per-party basis, it would ignore the significant encumbrances that exist in the lower portion of the L-band" which is licensed to Globalstar.*^{3/} There has been no change in this situation to justify the FCC's reversing its position.
 - *Third*, Iridium has never shown that it is even using the spectrum that the FCC forced Globalstar to share with it in 2004, let alone that it needs access to more. Indeed, while Globalstar publicly discloses its customer numbers (which now total over 250,000), Iridium does not. Instead, Iridium's efforts to take spectrum away from Globalstar appear to be intended solely to disadvantage its main competitor and increase Iridium's market value.
- Soon after Iridium received access to Globalstar's spectrum, Iridium admitted to the FCC that, unlike Globalstar, it was unable to turn satellite channels on and off on a national or regional basis. This meant that Iridium was operating in the shared spectrum around the world without regulatory approval.
- Iridium is now soliciting regulators in Europe and elsewhere to conform their authorizations to the FCC's (to allow Iridium to use the 1616-1618.25 MHz band which is allocated to Globalstar on a global basis). **However, in Europe, a technical committee of regulators recently concluded that CDMA and TDMA systems cannot share spectrum in the traditional sense, and that therefore there was no technical basis to give Iridium access to Globalstar's spectrum.** In addition, Iridium's operation of its secondary downlinks in the shared portion of the band has caused interference into radioastronomy observatories. The

^{3/} *Id.* at 13378 ¶ 49.

German government filed a protest with the FCC in June 2006 objecting to Iridium's interference, which the FCC has yet to address.

- In its most recent responses to Iridium's request for more of Globalstar's spectrum, Globalstar has suggested that, if Iridium truly believes that spectrum "sharing" is possible between Globalstar's CDMA system and Iridium's TDMA system, then any new sharing requirement that the FCC might adopt should be applied evenhandedly. In order not to discriminate unjustly against Globalstar, the Commission should authorize *both* Globalstar and Iridium to share in the U.S. all of the L-band MSS spectrum that they are technically capable of using, subject to appropriate coordination arrangements. Under such an approach, Iridium and Globalstar each would be able to use those portions of the spectrum between 1616 and 1626.5 MHz that it is technically capable of using, subject to coordination with the other. In support of that position, Globalstar submitted a proposed set of "Coordination Principles" to which Iridium responded, in part, on January 22, 2007.
- In summary, Globalstar has presented unrebutted evidence that: (1) while Iridium may suffer constraints on its satellite system capacity, those constraints are in no way related to the amount of exclusive spectrum that Iridium is authorized to use; (2) the FCC has failed to base its decisions on the factual, unrebutted record before it in contravention of the Administrative Procedure Act and its own governing statute; and (3) in accommodating Iridium, the FCC's decisions have compromised Globalstar's ability to grow and to serve its government and commercial customers.

Globalstar/Iridium Bands

